

Public Key Infrastructure

Public Debt Smart Card User Guide

August 11, 2004

TABLE OF CHANGES

| Version | Date | Change Description | Initials | Section |
|-------------|------------|---|----------|---------|
| 1.0 | 07/26/2004 | Initial Revision | TJ | ALL |
| 1.0 | 07/27/2004 | Misc Corrections/Accuracy | AS | ALL |
| 1.0 | 08/04/2004 | Change ActiveCard to ActivCard | TJ | ALL |
| 1.0 | 08/09/2004 | Added Cisco VPN Client Install | TJ | 2.3 |
| 1.0 (Final) | 08/10/2004 | Added content to Troubleshooting section | TJ | 5 |
| 1.0 (Final) | 08/11/2003 | Software de-install notice & updates to section 3.1 | TJ | 2 & 3.1 |
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1. Introduction

1.1. Overview

The "Smart Card" in use at Public Debt is integrated with the standard Public Debt Identification badge. The "Smart Chip" is located under the Treasury seal on the front of the card. The technologies incorporated in this chip are the same technologies used in the Electronic Treasury Enterprise Card (E-TREC) program.



Figure 1

Some things to remember about your new ID card:

- Try not to touch the gold chip contacts on the card with your fingers. The oil from your skin may cause corrosion of the contacts over a period of time, which can prevent the chip from working with the reader. If touched, simply wipe the chip off with a smooth dry cloth.
- Do not bend the card for any reason as this can damage the Smart Chip.
- Try to avoid sharp objects and magnets coming in contact with the card.

1.2. Obtaining your new Smart Card

If you have not already received your Smart Card, one must be requested from the Physical Security branch.

A Physical Security Specialist issues identification cards to employees, contractors, and no escort required visitors. Prior to issuing an identification card, a PD F 5402 E (Personal Information Sheet) has to be completed and a background investigation will have to be initiated since these cards allow unescorted access into Public Debt facilities.

1.3. Lost or Stolen Smart Card

In the event that you lose your card, or it is stolen, it is extremely important that you first notify the Physical Security branch immediately so your ID Card may be deactivated within the physical security system.

When an identification card is lost or stolen the security guard will issue a temporary badge to allow access to the building. In cases where the card is lost or stolen, it is the employee's responsibility to notify Security at extensions 7573 or 6341 or email "Security (Physical)" as soon as possible. A Security Specialist will issue a new card and deactivate the old card to prevent it from being used by unauthorized personnel.

Afterwards, you must contact your Information Systems Security Representative (ISSR)/Fiscal Service Registration Authority (RA) to have your certificates on the card revoked.

Once this has been completed, you will be placed in "key recovery", a process to re-retrieve your certificates onto a new Smart Card.

1.4. Temporary Cards

Temporary cards are issued to Public Debt employees that have forgotten their identification card. These cards are issued by Public Debt Security Guards after verifying the individual's identity to ensure they are authorized to enter Public Debt facilities. Temporary cards are valid for one day and must be returned to the Security Guard when leaving the facility at the end of the day.

These cards are Not Smart Cards, and your certificate will not be available on these cards.

2. Software Installation

All software relating to the older Public Debt "BPD CA" should be <u>de-installed</u> from your system. This includes "*Entrust Desktop Solutions*" and the 3.6 version of the VPN Client.

Once you have your new Smart Card, you will need to install the Smart Card middleware that is used to communicate with the Smart Chip. This software is called ActivCard Gold. You will also need to install software that manages the certificate on the smart card. This software is called the Entrust Entelligence Security Provider. After the installation of your software, and while you perform the Smart Card Initialization, you will need to import two Certificate Authority (CA) certificates to the Smart Card.

The software may be obtained multiple ways. Distributed Systems Branch can provide you with a CDROM titled "ActivCard Gold & Entrust Entelligence Security Provider" containing the software and CA Certificates, or you can download the software from Public Debt's FTP site using the URLs below:

ActivCard Gold:

ftp://ftp.publicdebt.treas.gov/fiscalca/Middleware/ActivCard Gold 2.3.1.exe

Entrust Entelligence Security Provider:

ftp://ftp.publicdebt.treas.gov/fiscalca/Desktop/fiscalca_eesp_activcard_1.0.exe

CA Certificates

ftp://ftp.publicdebt.treas.gov/fiscalca/cacertificates/rootca.cer
ftp://ftp.publicdebt.treas.gov/fiscalca/cacertificates/fiscalca.cer

Public Debt VPN Client

ftp://ftp.publicdebt.treas.gov/fiscalca/bpdvpnclient.exe

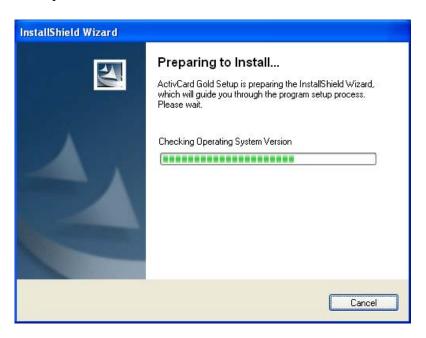
2.1. ActivCard Gold

1. If you obtained a CDROM containing the software from Distributed Systems Branch, insert the CDROM into your computer. The Microsoft AutoPlay feature should automatically execute the **run.exe** file in the root directory of the CDROM. Once the "ActivCard" dialog appears, select "Install Product".

If you did not receive a CDROM, and you downloaded the software via the Public Debt FTP site, browse to the location where you saved the software and double click on "ActivCard Gold 2.3.1.exe", then select "Setup" in the "WinZip Self-Extractor" dialog.



2. An "InstallShield Wizard" dialog will appear providing a notification that it is preparing to install the software on your computer.



3. In the "ActivCard Gold 2.3.1 – InstallShield Wizard" welcome dialog, select "Next".



4. In the "ActivCard Gold 2.3.1 – InstallShield Wizard" License Agreement dialog, select "I accept the terms in this license agreement", then select "Next".



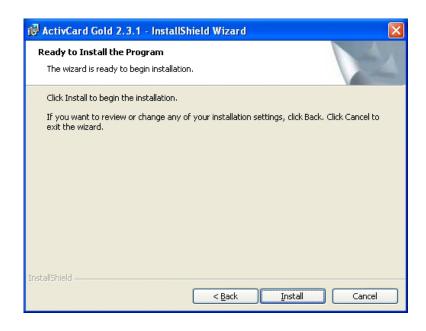
5. In the "ActivCard Gold 2.3.1 – InstallShield Wizard" Customer Information dialog, enter Your Name in the "User Name" field, and "Bureau of the Public Debt" in the "Organization" field, then select "Next".



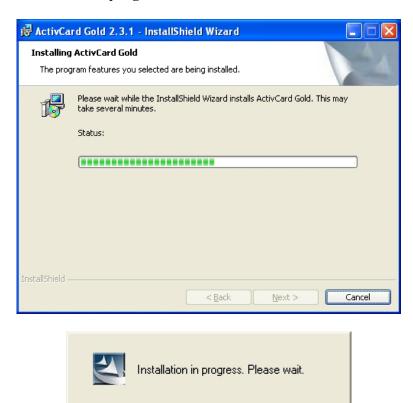
6. In the "ActivCard Gold 2.3.1 – InstallShield Wizard" Setup Type dialog, select "Typical", then select "Next".



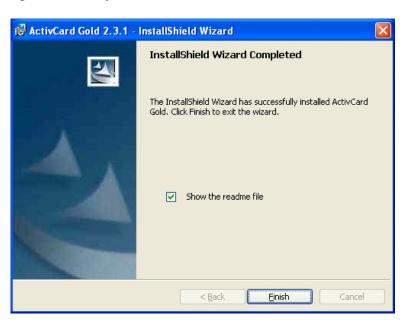
7. In the "ActivCard Gold 2.3.1 – InstallShield Wizard" Ready to Install the Program dialog, select "Install".



8. The Middleware will be installed on your system. After a few moments the "ActivCard Gold 2.3.1 – InstallShield Wizard" dialog may disappear, and you may notice another informational dialog with the notification "Installation in progress. Please wait."



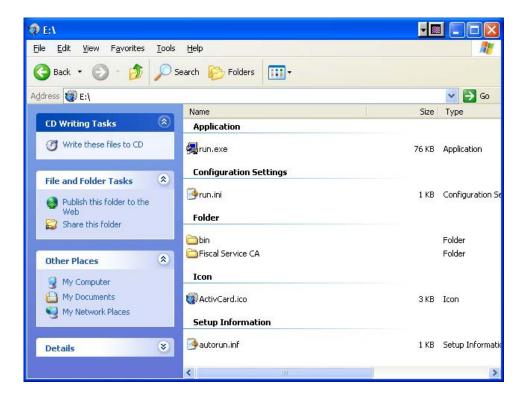
9. In the "ActivCard Gold 2.3.1 – InstallShield Wizard" InstallShield Wizard Completed dialog, deselect "Show the readme file", then select "Finish". Please proceed with the next section to install the Entrust Entelligence Security Provider.



2.2. Entrust Entelligence Security Provider

1. If you obtained a CDROM containing the software from Distributed Systems Branch, browse to the CDROM, then to the "Fiscal Service CA" directory. Double click on "fiscalca eesp activeard 1.0.exe"

If you did not receive a CDROM, and you downloaded the software via the Public Debt FTP site, browse to the location where you saved the software and double click on "fiscalca eesp active at 1.0.exe"



2. In the "WinZip Self-Extractor" dialog select "Setup".



3. In the "Entrust Entelligence Security Provider Setup" welcome dialog, select "Next".



4. In the "Entrust Entelligence Security Provider Setup" License Agreement dialog select "I accept the license agreement", then select "Next".



5. In the "Entrust Entelligence Security Provider Setup" User Information dialog, enter Your Name in the "Full Name" field, and "Bureau of the Public Debt" in the "Organization" field, then select "Next".



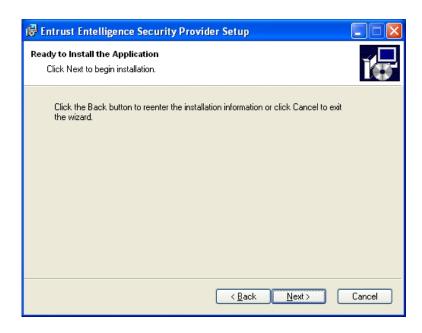
6. In the "Entrust Entelligence Security Provider Setup" Destination Folder dialog select "Next".



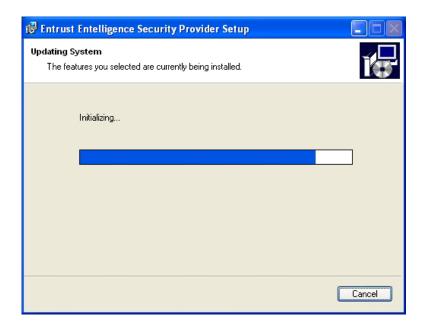
7. In the "Entrust Entelligence Security Provider Setup" Select Installation Type dialog select "**Typical**", then select "**Next**".



8. In the "Entrust Entelligence Security Provider Setup" Ready to Install the Application dialog, select "Next".



9. The software will be installed on your system.



10. In the "Entrust Entelligence Security Provider Setup" dialog, select "Finish".



11. Reboot your system to make the new software initialize. After you reboot and re-authenticate to your system, please proceed to the "*Smart Card Initialization*" section of this manual if you have a new Smart Card.



2.3. Cisco Systems VPN Client

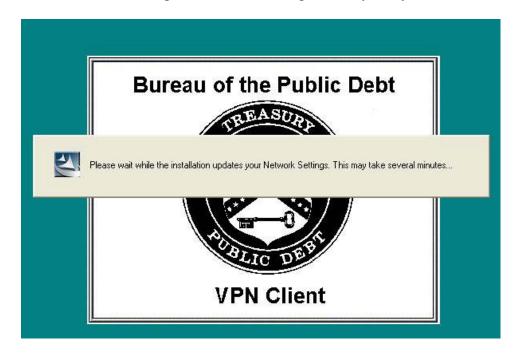
Once you have initialized your Smart Card (Section 3), Retrieve & Register Certificates (Section 4), you may proceed with the installation of the VPN client.

Note: If you are using Microsoft Internet Connection Sharing then you must uninstall it before installing the VPN client.

1. If you obtained a CDROM containing the software from Distributed Systems Branch, browse to the CDROM, then to the "*Public Debt VPN*" directory. Double click on "**bpdvpnclient.exe**"

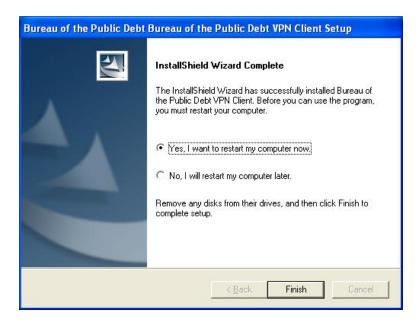
If you did not receive a CDROM, and you downloaded the software via the Public Debt FTP site, browse to the location where you saved the software and double click on "**bpdvpnclient.exe**"

The VPN Client installation will begin and start installing files on your system.

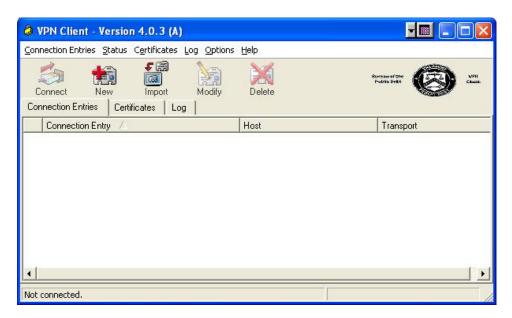


Fiscal Service Public Key Infrastructure

2. In the dialog "Bureau of the Public Debt VPN Client Setup" InstallShield Wizard Complete, ensure "Yes, I want to restart my computer now." And then select "Finish".



3. After rebooting your computer, select "Start->Programs->BPD VPN Client->Bureau of the Public Debt Dialer". A dialog titled "VPN Client 4.0.3 (A)" will appear. Select the "New" button on the top left side of the dialog.



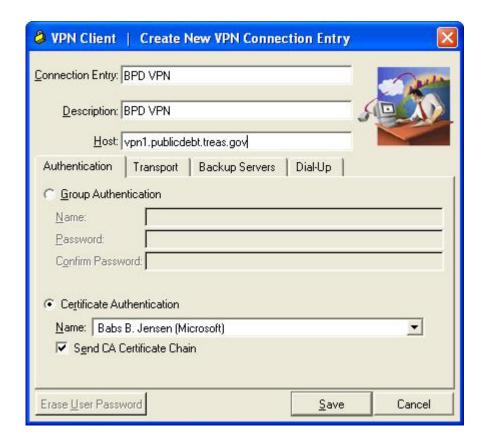
4. A dialog titled "VPN Client | Create New VPN Connection Entry" will appear. Complete the following items below:

a) Connection Entry: BPD VPNb) Description: BPD VPN

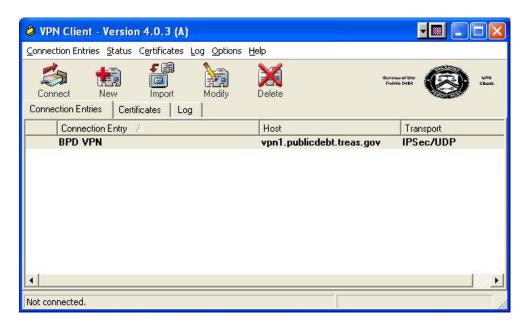
c) Host: vpn1.publicdebt.treas.gov

- d) Select "Certificate Authentication".
- e) Under "Name" select the first instance of "[your name] (Microsoft)".
- f) Select "Send CA Certificate Chain"

Select "Save".



5. In the dialog titled "VPN Client 4.0.3 (A)", a new connection entry titled "BPD VPN" will exist.



6. To initiate a VPN connection to Public Debt, insert your Smart Card into the Card Reader, and select the "Connect" button in the VPN dialer. You will be prompted to enter the password for your Certificate Smart card by a dialog similar to the one below:



3. Smart Card Initialization

After you perform the software installation in chapter 2, you must first initialize your Smart Card prior to retrieving your certificate. Refer to section 3.1 below to initialize a new Smart Card. In the event you forget the PIN/Password to your card, follow the steps in section 3.2 to Re-Initialize your card.

During the initialization process, you will be prompted to enter a new PIN. This PIN is the password you will use to unlock your smart card each time it is used. This password must conform to Public Debt password standards.

It is critical you complete these steps as documented, and most important, document the "Unlock Code" that will be presented to you near the end of the initialization process. Failure to document the "Unlock Code" will result in the inability to recover your card if you forget your password, of if the card becomes corrupted. If this were to occur, the chip in the card may not be re-used and a new card must be issued to you.

3.1. Initializing your new Smart Card

1. After the installation of the ActivCard Gold middleware, and a reboot of your PC, you will see an image of a blue Smart Card in a reader in the lower right corner of the screen in the "System Tray".



2. Right click on the image of the card in the reader, and then select "Utilities".

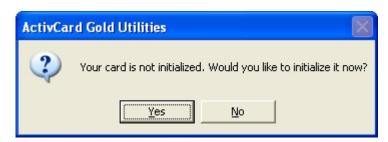


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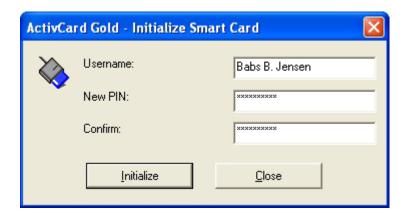
3. A dialog titled "ActivCard Gold Utilities" will appear on your screen, and you will see the contents "please enter your card". Enter your Smart Card into the reader.



4. If you have a new card, or if the card has been reset, the software will recognize that it has not been initialized, and will present you with a question "Would you like to initialize it now?" Select "Yes"



5. A dialog titled "ActivCard Gold – Initialize Smart Card" will appear to begin the process. In the field "*Username*", enter your full name. In the field "*New PIN*", enter your password. Enter your password again in the "*Confirm*" field. After you are completed entering your information, select "**Initialize**". The PIN/Password is the password you will always use to unlock your Smart Card



6. A dialog should appear with the status "The smart card was successfully initialized." Select "OK".



7. A small status splash will appear on your screen notifying you to "*Please wait while the smart card is being accessed*".



8. After a moment, the "ActivCard Gold Utilities" dialog will re-appear showing you the contents of the card.

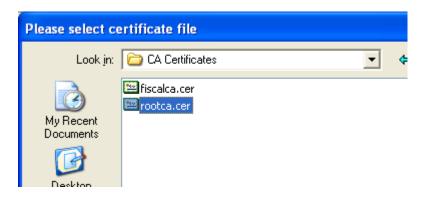


9. Right click on "CA Certificates" in the "ActivCard Gold Utilities" dialog, and select "Import CA".



10. Browse to the location of the Fiscal & Treasury Root CA certificates. If you have the CDROM, they are located in [CDDrive]\Fiscal Service CA\CA Certificates\. Copy the files rootca.cer and fiscalca.cer to your Desktop. If you do not have the CDROM, browse to the location where you saved the CA certificates when downloading them from the Public Debt FTP site URLs above.

11. Select "rootca.cer", and then select "Open".



12. A status dialog will appear notifying you that the certificate is being imported.



13. Right click on "CA Certificates" in the "ActivCard Gold Utilities" dialog, and select "Import CA".



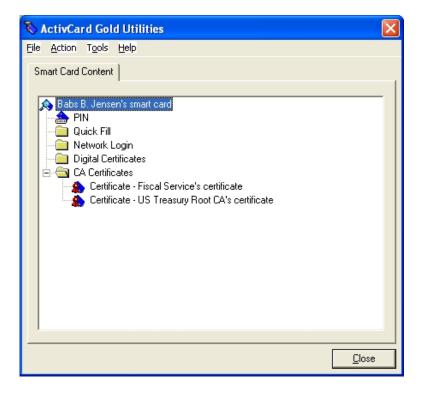
14. Browse to the location of the Fiscal & Treasury Root CA certificates. Select "**fiscalca.cer**", and then select "**Open**".



15. A status dialog will appear notifying you that the certificate is being imported.



16. Both of the CA Certificates should now be in the "CA Certificates" container on the Smart Card.



- 17. Completely remove and re-insert your Smart Card into the reader*. You will be prompted to relogin to your card. Enter your PIN/Password and select "**OK**".
 - * Your screen may lock when you remove the smart card. If this occurs, press **Ctrl><Alt><Delete>**, enter your **User ID** and **Password**, and then **Enter>** to log back into your system. Insert your card back into the reader and resume this procedure.



18. The dialog "ActivCard Gold – Unlock Code" will appear after a successful login. Locate the Unlock Code and write it down in the space provided below.

Unlock Code:

Once you have placed the unlock code in this manual, be sure to keep this manual in a secure location in the event you forget your password, or lock your card due to too many login attempts. This Unlock Code will be used in section 3.2. Select "Close" to close the dialog, and then close the "ActivCard Gold Utilities" dialog.



This completes this section. You may now proceed to section 4.

3.2 Unlocking your Smart Card

1. Find the image of a blue Smart Card in a reader in the lower right corner of the screen in the "System Tray".



2. Right click on the image of the card in the reader, and then select "Utilities".



3. A dialog titled "ActivCard Gold Utilities", will appear on your screen, and you will see the contents "please enter your card". Enter your Smart Card into the reader.



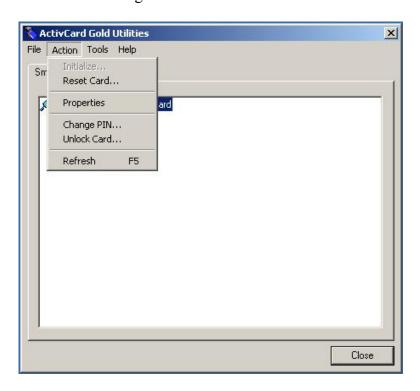
4. You will be prompted to re-login to your card. Select "Cancel".



5. The "ActivCard Gold Utilities" dialog will only show the "PIN" container.



6. In the "ActivCard Gold Utilities" dialog select "Action" then "Unlock Card..."



7. A dialog titled "ActivCard Gold Utilities – Unlock PIN Code" will appear. Enter your "Unlock Code" you wrote down on Step 21 in Section 3.1 "Initializing your new Smart Card". In the field "New PIN", enter your password. Enter your password again in the "Confirm New PIN" field. After you are completed entering your information, select "OK"



8. An "ActivCard Gold Utilities" informational dialog should appear notifying you that "The smart card was successfully unlocked." Select "**OK**".



3.3 Resetting your Smart Card

Resetting your Smart Card will **completely destroy the entire contents of the card**! This will require you to perform Sections 3.1 "*Initializing your new Smart Card*" and 4.2 "*Key Recovery*" in order to use your card for any purpose.

1. Find the image of a blue Smart Card in a reader in the lower right corner of the screen in the "System Tray".



2. Right click on the image of the card in the reader, and then select "Utilities".



3. A dialog titled "ActivCard Gold Utilities" will appear on your screen, and you will see the contents "please enter your card". Enter your Smart Card into the reader.



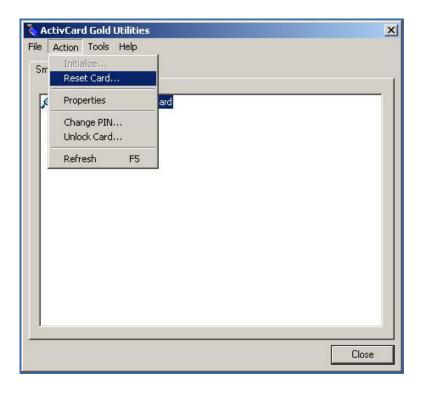
4. You will be prompted to re-login to your card. Select "Cancel".



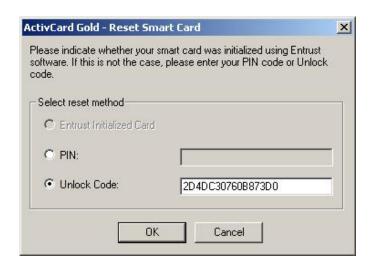
5. The "ActivCard Gold Utilities" dialog will only show the "PIN" container.



6. In the "ActivCard Gold Utilities" dialog select "Action" then "Reset Card..."



7. A dialog titled "ActivCard Gold Utilities – Reset Smart Card" will appear. Select "Unlock Code", and then enter your "Unlock Code" you wrote down on Step 21 in Section 3.1 "Initializing your new Smart Card". Select "OK"



8. A dialog will appear asking "Are you sure you want to reset this card?" Select "Yes".



9. An "ActivCard Gold Utilities" informational dialog should appear notifying you that "The smart card has been successfully reset." Select "**OK**".



10. Proceed with Step 4 in Section 3.1 and complete the rest of Section 3.1 to re-Initialize your Smart Card. Please note that your "*Unlock Code*" will change to a different value, so be sure to redocument the new value in Step 21.



4. Certificate Retrieval

In order to obtain a Certificate from the Fiscal Service Certificate Authority, you must first complete the registration process. This must occur for both "First Time" certificate Retrievals as well as for the Key Recovery Process.

For Initial Registration, you must initiate this process with your designated Registration Authority. Your Public Debt Information Systems Security Representative (ISSR) and Backup Information Systems Security Representative (BISSR) should be your Fiscal Service Certificate Authority Registration Authority.

For initial registration, you are required to fill out Form FS-6 "Certificate Application", as well as providing two forms of picture identification.

For key recovery, you are required to fill out Form FS-7 "Certificate Recovery", as well as providing two forms of picture identification.

Acceptable forms of identification are your Drivers License and your Public Debt Badge/Smart Card.

4.1. "First Time" Retrieval

The following procedures should be performed *after* you have installed the software using the procedures in Section 2, and after you have initialized your Smart Card using the procedure in Section 3.1.

1. You will see an image of a Red "X" and Yellow Key in the lower right corner of the screen in the "System Tray".



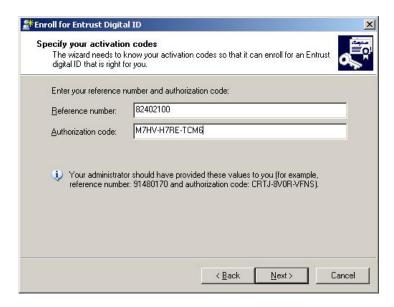
2. If your Smart Card is not in the reader, enter your Smart Card into the reader, then right click on the image and select "Enroll for Entrust Digital ID".



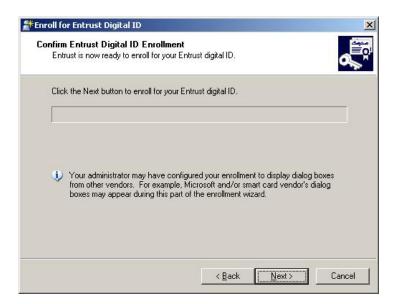
3. An "Enroll for Entrust Digital ID" Welcome dialog will appear. Select "Next".



- 4. At the "Enroll for Entrust Digital ID" Specify your activation codes dialog, enter your Reference Number and Authorization Code*. Select "Next".
 - * A Reference Number is always a numeric value. The Authorization Code is a combination of letters, numbers, and dashes. An Authorization Code will never contain the letter 'O'.



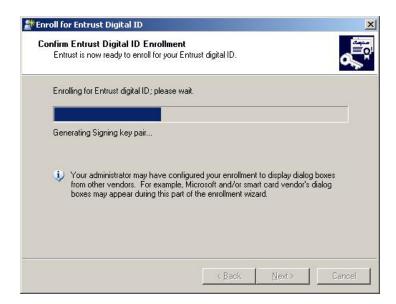
5. At the "Enroll for Entrust Digital ID" Confirm Entrust Digital ID Enrollment dialog select "Next".



6. The Certificate Retrieval process will begin. During this time, there will be activity between the software and your Smart Card.

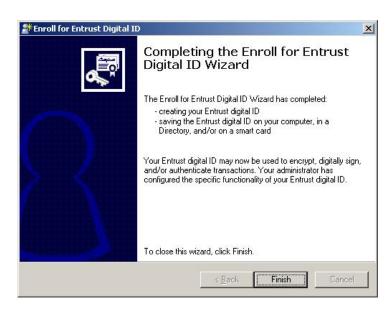
During the retrieval process, you may receive an "ActivCard Gold – Enter PIN" dialog. Enter your PIN/Password, and then select "**OK**".

The image of the Smart Card in a Reader that is located in your System tray will flash between red and blue to notify you of the activity. During this time, do not remove your smart card.





7. At the "Enroll for Entrust Digital ID" Completing the Enroll for Entrust Digital ID dialog select "Finish".



This completes this section. Please proceed to section 4.3.

4.2 Key Recovery

The following procedures should be performed *after* you have initialized your Smart Card using the procedure in Section 3.1.

1. You will see an image of a Red "X" and Yellow Key in the lower right corner of the screen in the "System Tray".



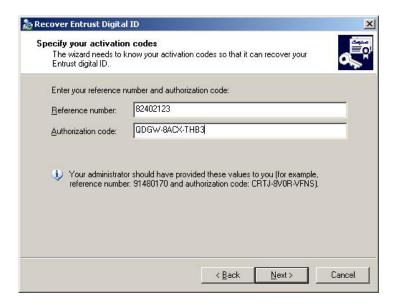
2. If your Smart Card is not in the reader, enter your Smart Card into the reader, then right click on the image and select "Recover Entrust Digital ID".



3. A "Recover Entrust Digital ID" Welcome dialog will appear. Select "Next".



- 4. At the "Recover Entrust Digital ID" Specify your activation codes dialog, enter your Reference Number and Authorization Code*. Select "Next".
 - * A Reference Number is always a numeric value. The Authorization Code is a combination of letters, numbers, and dashes. An Authorization Code will never contain the letter 'O'.



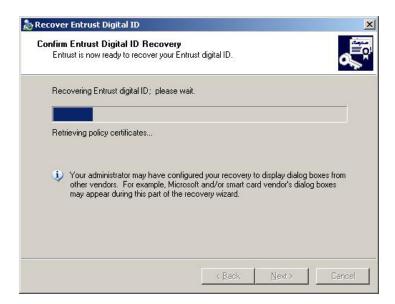
5. At the "Recover Entrust Digital ID" Confirm Entrust Digital ID Recovery dialog select "Next".



6. The Certificate Retrieval process will begin. During this time, there will be activity between the software and your Smart Card.

During the retrieval process, you may receive an "ActivCard Gold – Enter PIN" dialog. Enter your PIN/Password, and then select "**OK**".

The image of the Smart Card in a Reader that is located in your System tray will flash between red and blue to notify you of the activity. During this time, do not remove your smart card.





7. At the "Recover Entrust Digital ID" Completing the Recover Entrust Digital ID dialog select "Finish".



This completes this section. Please proceed to section 4.3.

4.3 Register Certificates

This must be performed <u>after</u> you have successfully retrieved your certificates.

For each PC where you may use your smart card, perform the remaining steps after installing the software. This tells the Operating System on the PC where to find the Certificates on your Smart Card.

- 1. Launch ActivCard Gold Utilities, enter your Smart Card, and login with your PIN/Password.
- 2. In the "ActivCard Gold Utilities" dialog, select "Tools" then "Register Certificates".



3. A dialog will appear asking you "Do you wish to proceed with this action?" Select "Yes".



4. A "Security Warning" dialog will appear asking you "Do you want to install this certificate?" Verify the SHA1 "Thumbprint" below, and then select "Yes".

SHA1 Thumbprint: C2D405C8 0570CB42 2BF4C4E0 CF6BA6F5 A49DF2CB



5. A dialog will appear confirming, "The certificate has been successfully installed." Select "OK".



5. Notes

6. Troubleshooting

| Problem Description | Solution |
|---|---|
| "I receive an error message | Disconnect and reconnect your Smart Card Reader. |
| about a PC/SC error." | If it is embedded in the laptop, please reboot. |
| | If the problem persists, please contact the Public Debt Help Desk |
| "I receive a message in ActivCard Gold Utilities that | Perform the following steps to recover the Smart Card Service : Description Card Card Ca |
| the Smart Card Service is not | a. De-install ActivCard Gold |
| started." | b. Reboot |
| | c. Stop the smart Card service |
| | d. Open a command prompt and enter the following two commands: |
| | Regsvr32 %windir%\system32\scardssp.dll Scardsvr reinstall |
| | e. Make the following registry changes: |
| | [HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SCardSvr] "Start"=dword:00000002 "ObjectName"="NT AUTHORITY\\LocalService" |
| | [HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\SCardDrv] "ObjectName"="NT AUTHORITY\\LocalService" |
| | f. Reboot g. Install ActivCard Gold & Reboot |

Fiscal Service Public Key Infrastructure

Troubleshooting - A

This will completely re-install the smart card service.

Fiscal Service Public Key Infrastructure

Troubleshooting - B

| Problem Description | Solution |
|----------------------------|---|
| "I forgot to write down my | The chip in your badge is now useless. This card cannot be recovered by anyone unless you remember the |
| unlock code when I | password. Please request a new badge be issued. |
| initialized my card, now I | |
| forget my password." | |
| No matter how many times I | You most likely have the Microsoft Proxy Client installed on your system. |
| try from the BPDLAN, I can | |
| not Enroll or Recover my | Find the proxy client icon in the system tray, right click on it, and select disable. |
| Digital ID (Certificate) | Re-try the retrieval procedures in section 4. |
| | |
| | Once you have successfully retrieved your certificate, you may re-enable the Proxy Client. If you still |
| | encounter errors, please contact the Public Debt Help Desk. |
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Fiscal Service Public Key Infrastructure

Troubleshooting - C